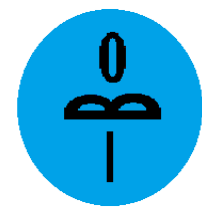


Overseas Business Insights



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Chile's Electrical Transmission System

Chile's electrical transmission system lacks interconnections between its two primary national grids, as well as to neighboring countries such as Peru and Argentina. The government has lent its support to a private sector led transmission project to be completed in the second half of 2017 that would for the first time connect the northern and central Chilean grids.

The country's two major electricity grids combined have around 18,100 megawatts (MW) of installed capacity as of March 2014, of which non-conventional renewables represent 6-10% of the total energy matrix. Hydroelectric plants larger than 20 MW compose 27% of Chile's energy matrix, but are excluded from Chile's nonconventional renewable energy metrics. Renewable energy generation in Chile is expanding, growing 40% in 2013 alone, and there are over



1,200 MW of renewable energy projects currently under construction or recently completed. Prevailing energy prices are relatively high: consistently over \$100 per MW-hour at times with spikes to \$150 per MW hour and over the past few years an average of close to \$130 per MW hour.

Chile's "Energy Agenda," announced in 2014, includes a mandate that 45% of all new generation capacity between now and 2025 come from renewable projects; that all energy supply contracts require around 6% of the energy supplied come from renewable sources; and that 20% of

Chile's energy matrix come from nonconventional renewable sources by 2025.

Chile's electricity grid is divided into two large, separate grids—the Northern System (SING) with 25% of total capacity, the Central

System (SIC) with 74% of the country's capacity, and two smaller unconnected systems in the south that account for less than 1% of total capacity. The two largest grids rely on a different blend of energy sources (the SIC relies on a strong contribution from hydroelectric sources) and have different demand profiles (residential vs industrial). The lack of interconnection between these two grids can cause price inefficiencies. For example, if there is excess capacity in the SING, energy prices there will be lower than prices in the SIC, particularly compared to prices in the Santiago metropolitan region.

With no interconnection between the two grids, new non-conventional renewable energy projects connected to the northern grid have no way to send their energy further south to where demand and prices are higher.

Despite these inefficiencies, merchant power plants, which sell power to the electric grid at spot prices and which have no Power Purchase Agreements (PPAs), remain competitive in the market and several large projects have been completed or are moving ahead without these PPAs in place, such as SunEdison's (a U.S.-based solar company) 72.8 MW Maria Elena Project or SunPower's 70 MW Salvador Project. On January 29, the National Energy Commission announced its support for a pre-existing private sector led transmission interconnection slated to be completed in the

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Colombia - Flowers!

Colombia is the second largest flower producer in the world, after Holland, exporting over \$1 billion worth of cut flowers to the United States in 2013 and another \$340 million to the rest of the world. The Alliance for Progress and USAID both provided assistance in the 1960s that helped launch

flower exports to the United States. Today, flowers are Colombia's fourth largest export. Of these exports, 75 percent goes to the United States, followed by Russia (5 percent), Japan (4 percent), United Kingdom (3 percent), and Canada (3 percent). With Colombia providing

80 percent of all cut flowers in the United States by volume and 65 percent by value, it is by far the largest supplier to the United States.

Colombia's success has spurred a \$10 billion industry in the United States and tens of thousands of jobs in the value chain including

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Colombia – continued

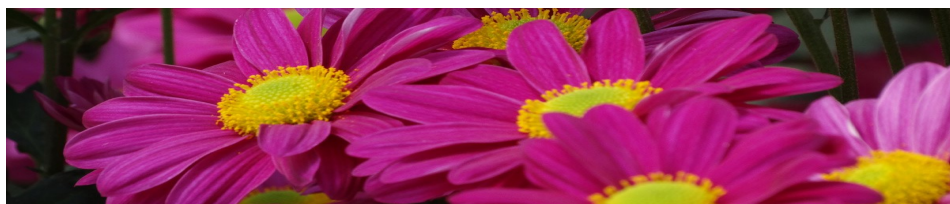
U.S.-based importers, brokers, truckers, wholesalers, florist retailers, and mass marketers. By value, flowers are the single most important cargo item at three international airports (Miami, Bogotá, and Medellín), and during peak holidays like Valentine's or Mother's Day, 30 to 35 fully loaded cargo flights depart Colombia daily, most landing in Miami. Miami has around 150 companies that import and distribute Colombian flowers throughout the United States, and over 30 U.S. trucking companies depend on flowers, according to the Foreign Agriculture Service.

The Colombian flower industry employs 90,000 Colombians directly and 40,000 indirectly. Two thirds of workers are female, and this industry provides one quarter of formal jobs for women in rural areas,

particularly female heads of household around the Bogotá savannah where three quarters of Colombia's flowers are grown. The trade association for flower exporters - Asociación Colombiana de Exportadores de Flores (aka Asocoflores) launched a code of conduct initiative in 2005 that was formalized in 2006 under the Florverde certification program, which calls for flower farms to employ sustainable social and environmental practices. USAID provided US \$ 2 million to Asocoflores to promote social responsibil-

ity and floriculture practices, including a chemical-free certification.

“During peak holidays like Valentine's or Mother's Day, 30 to 35 fully loaded cargo flights depart Colombia daily, most landing in Miami.”



Dominican Republic - Power Sector Developments

The Dominican Corporation of State-Owned Electricity Companies (CDEEE), has not recently signed new, long-term power purchase agreements (PPAs). The Dominican government has begun to negotiate new, short-term agreements with energy companies whose contracts are set to expire in 2015 and 2016.

Plans for Natural Gas Conversion

CDEEE is working to slowly diversify the energy mix and reduce reliance on petroleum. CDEEE and private sector companies are making progress in converting existing generation plants in the eastern region. In the Los Mina Energy Park, AES Dominicana broke ground on a combined cycle upgrade of its natural gas turbines, previously converted from petroleum, which will increase output by over 100 megawatts using the same amount of natural gas. In June 2014 AES signed a short-term PPA

with CDEEE that provided the guarantee which made the \$260 million investment feasible.

Another project underway is the conversion from petroleum to natural gas of the Cogentrix plant (300 megawatts), owned and operated by the Electrical Consortium for San Pedro de Macoris (CESPM). The plant conversion includes a renegotiation (not extension) of its current PPA with CDEEE, which expires in 2022. Antilles Gas is constructing the new LNG terminal with a planned completion in July to December 2016.

U.S. Donation Agreement for Three Energy Sector Projects

A number of pilot projects seek to reform generation and distribution at the local level. The United States Trade and Development Agency (USTDA) awarded over

\$1.6 million to three energy entities toward studies and projects to strengthen bilateral cooperation and increase the country's energy supply in an environmentally responsible manner. The first USTDA grant was to U.S.-owned solar panel company Trace International and will support the development of an innovative financing mechanism that allows customers to purchase commercial solar panels. The second involves a feasibility study of distributed generation and a pilot project to assess the technical and economic feasibility of implementing modular electric generators by the Energy Consortium Punta Cana and Macao (CEPM). For the third, USTDA is supporting the government's Coordinating Body of the National Interconnected Electric System Dominican Republic (OC-SENI) to evaluate technologies that improve service reliability, allow monitoring

and control of energy grids in real time, and lower the cost of service management. This project will assess the needs of all generators and distributors in the Dominican Republic.

Multilateral Funding for Major Distribution Reform Program

The international community is loaning significant sums in order to reform distribution and reduce technical and non-technical losses from 31 percent to 10 percent. The organizations providing financing and technical aid for the Distribution

Networks Rehabilitation and Loss Reduction Program, being executed by CDEEE, include the World Bank (\$120 million), the European Investment Bank (\$100 million), the Inter-American Development Bank (\$78 million), the OPEC Fund for International Development (\$60 million), and the European Union Caribbean Investment Fund (\$10 million). The three public distribution companies (EDEs), which will benefit from the program, have likewise contributed \$23 million. The multi-stage, multi-project program covers 33 circuits and will

employ remote metering, grid modernization and monitoring, community outreach, and institution strengthening of CDEEE. The program will also enhance the governance and accountability of the three public distribution companies (EDEs), including improved collection rates and quality of service, and distribution of the funds is contingent on subsidiary agreements with the EDEs entering into force.

Canada – Refining U.S. Oil in Quebec

Historically, Quebec's refineries relied on oil from major overseas producers shipped by oil tanker to ports in Quebec City and Montreal. Four years ago, approximately 70 percent of the C\$15 billion in Quebec crude oil imported came from Algeria, Kazakhstan, and Angola. The United States was not a major supplier and only eight percent came from Canadian sources. There is currently no pipeline connecting Western Canadian oil sands with Eastern refineries. With the closing of the Shell refinery in Montreal in 2010, only two refineries remain in the province: the Suncor refinery in Montreal and the Jean Gaulin (Valero) refinery in Lévis, near Quebec City. Together, the two facilities can refine approximately 405,000 barrels per day.

Both refineries started slowly sourcing their crude oil from U.S. sources after 2010. A 2012 National Bank estimate suggested Quebec refineries and consumers could save up to C\$3 billion annually if the province sourced West Texas Intermediate (WTI) from Canada and the United States rather than Brent-priced offshore crude oil, which is priced higher in part due to global economic factors. Both the previous and current government continue to support oil exploration in the province. An anticipated

infrastructure development fell into place when the Enbridge Line 9B pipeline reversal was approved by the National Energy Board (NEB) in March 2014. According to the NEB, the pipeline is expected to be online by the end of 2015 and will supply 300,000 barrels per day of North American oil to Quebec refineries.

Valero began sourcing a limited amount of Texas crude oil via tanker to its Lévis refinery in April 2013, with the goal of completely switching over to North American crude oil by the end of 2014. The ultimate goal is to have 60 percent of crude coming via the Line 9B pipeline, 20 percent via rail, and the remaining 20 percent by tanker from Texas. Similarly, the Suncor facility in Montreal has built additional rail unload capacity and is now sourcing much of its oil from North Dakota, with additional supplies of Texas oil delivered via the St. Lawrence river port. Concerns about rail safety remain following the explosion of an oil train in Lac Mégantic in 2013 that killed 47 people, but rail transportation of oil continues to grow in the province

Since 2010, the United States has displaced Algeria, Kazakhstan, and Angola's market share and is now the source for 50.5 percent of all oil imports, worth C\$8.6 billion in 2014.

“The ultimate goal is to have 60 percent of crude coming via the Line 9B pipeline, 20 percent via rail, and the remaining 20 percent by tanker from Texas.”

The shift in oil imports has reoriented Quebec's trading relationships with U.S. states. Until recently, New York state was Quebec's largest trading partner in the United States, with its close geographic proximity and similar manufacturing profile. But in 2014, Texas overtook New York and is the first U.S. state ever to break the C\$10 billion level of two-way trade with Quebec. As a result, the Quebec provincial government is planning on opening a new trade office in Houston in 2015 to accommodate the growing relationship. Similarly, Quebec's imports from North Dakota have increased exponentially, from a miniscule \$3.7 million in 2010 to \$1.7 billion in 2014. Twenty-three U.S. states now have at least C\$1 billion in trade with the province.

Exports from oil markets may have other secondary effects as Quebec firms become increasingly familiar with related industries

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in nontraditional U.S. state partners. For example, while oil is the primary export of North Dakota to Quebec, two-way trade between the state and province in other sectors has increased 40 percent since 2010, driven by agricultural products and machinery. Quebec exports to Texas have increased 15 percent since 2010 to C\$3.2 billion, with strong growth in manufacturing and refined petroleum products. Idaho and Nevada have both increased exports of precious metals to Quebec for manufactur-

ing purposes. Overall, trade with states in the west and south is increasing rapidly, while traditional trading relationships in the northeast remain stable.

States with Fastest Growing Trade with Quebec (SC Million)			
	2010	2014	Growth rate
NORTH DAKOTA	32	1,818	5501%
WYOMING	34	442	1181%
IDAHO	54	243	349%
MONTANA	22	87	299%
TEXAS	4,204	10,217	143%
NEVADA	97	234	140%
GEORGIA	1,274	2,461	93%
WASHINGTON	592	1,130	91%
LOUISIANA	605	1,110	84%



Chile – continued from page 1

second half of 2017. E-CL, a French company owned by GDF Suez, plans to build a 360-mile transmission line to connect its power plants in northern Chile to the northern portion of Chile's SIC. According to GDF Suez, the line, expected to cost \$700 million, could facilitate the development of a number of major mine projects in the region. The line would connect the northern port of Mejillones, a center for thermoelectric generation, to the Cardones substation at the northern end of central Chile's SIC grid. ECL, which controls around half of installed capacity on northern Chile's SING grid, said the line would give the company "access to a new market of unregulated clients and/or distribution firms on the SIC, using new or existing power plants." A reliable trunk line be-

tween the SIC and SING will set the stage for interoperability and connections to the larger regional market beyond Chile's borders. Existing lines in the northern portion of the SIC are already saturated and the risk of curtailment is high. In 2015, the SIC will only be able to manage 1,000 MW of renewable energy owing to saturated transmission lines.

On February 2, the government of Chile indicated that it had approved AES Gener, which operates in Argentina and Chile, to use its existing, currently unused interconnection infrastructure between Chile's SING and the Argentine northern grid (SADI) to send surplus energy from northern Chile to northern Argentina. Other than recent tests, the line was last used in

2010 to send electricity from Argentina to Chile. Although AES Gener does not currently have excess capacity in the SING to transfer to Argentina, it would offer its transmission services to other generators in the SING as a means to provide its excess capacity to Argentina. If only unused or excess Chilean generation is sold to Argentina, this would not raise the cost of energy in the Chilean system. The Andes-Salto 345-kV transmission line connects the Andes substation in Chile to the generator's 643 MW TermoAndes plant in Salta, Argentina. Studies indicate that up to 250 MW could be transferred through the existing lines from Chile's SING to Argentina's SADI.

Brazil - Ports Infrastructure

Brazil utilizes its ports as the gateway for more than 80 percent of its imports and exports. While the government's Growth Acceleration Program and the U.S.-Brazil Transportation Partnership (TP) have helped advance Brazil's infrastructure expansion, the country's ports and waterways remain underdeveloped by global standards. Continued collaboration with Brazil to upgrade its transportation infra-

structure through mechanisms such as the TP will facilitate two-way trade with the United States, which totaled US \$73 billion in 2014.

The Government of Brazil allocated US \$26 billion for its ports sector from 2007 through 2017 under its Growth Acceleration Program. With some dredging works already completed, analysts estimate 30 percent more vessels can now

dock in Brazil than could in 2007 because waterways are deeper and can handle bigger ships. Despite this progress, dredging works are still needed throughout Brazil. Although the government has allocated US \$3.5 billion to the 10-year national dredging plan that started in 2007, and the private sector has invested US \$4.9 billion to date, the National Port Terminals Association asserts investments need to double to maintain dredging

projects across the country. According to industry observers, cargo container terminal bottlenecks and limited railways and roads in the vicinity of Brazil's ports pose additional challenges.

The Port of Santos outside the city of Sao Paulo handles 28% of Brazil's exports. With 90 percent of its industrial base located within 125 miles of the port, Sao Paulo state's economic trade relies heavily on the port. It is the busiest container port in Latin America, yet it takes an average of six days for ships to unload goods compared to a worldwide average of three days. Overall, it takes an average of 17 days for imports to clear customs, while in neighboring Uruguay it takes six. Like other ports in Brazil, the Port of Santos requires dredging, as it is currently

only eight meters deep but needs to be 15 meters deep to handle the biggest ships. Difficulties in concluding a comprehensive long term procurement solution at the port have led the government to hire companies to conduct temporary "surgical dredging." The port also faces a capacity issue with regard to trucking. As a result, trucks park on the adjacent highway for days, delaying the import process.

To address the issue of import and export delays, the Ministry of Development, Industry and Foreign Trade announced in December that Brazil would fully implement its "single window" initiative (one-stop shop for import/export processing) by 2017 to decrease trade bottlenecks at ports. The early phase of implementation would include introducing an electronic document system and a web-based drawback system for duty rebates. The gov-

ernment anticipates a reduction in the time for export processing from 13 to 8 days and import processing from 17 to 10 days through this program. By implementing the "single window" initiative, the Brazilian government anticipates it will add 2.5 percent to the nation's GDP.



Other resources for anyone interested in overseas business news:



The U.S. Government's main website to assist U.S. businesses at home and abroad. URL at <http://business.usa.gov/>



The Business Information Database System (BIDS) is a portal built to help U.S. businesses learn about significant international commercial opportunities.

The site connects U.S. business to detailed information about each project as well as information to contact U.S. embassies overseas. URL at <http://bids.state.gov/>



The Direct Line program provides a unique opportunity for American businesses, particularly small- and medium-sized enterprises, to engage directly via webcast with U.S. Ambassadors overseas. The program is open to U.S. companies – whether they are already in the country where the Ambassador serves or if they are interested in expanding their businesses there. Webcasts will vary in topic according to the specific needs for business in a given country. URL at <http://www.state.gov/directline/>

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